Guides for Proper Grazing

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(Note: This team demonstration should be used as a guide only. As prepared, it fits a district better than a county. To create more local interest, add county or community information, depending on who will hear the demonstration.)

First Speaker:

My name is _____ and my teammate's name is _____ _____. We are members of _____ County 4-H Club and we are eager to help our farmers and ranchmen properly use their rangeland. Without this proper grazing management, the cost of brush control, building more waterings and fences, deferred and rotation grazing, and natural or artificial range reseeding does not do much good. Proper rate of stocking is one of the most important problems of the range industry today. It's too bad most operators think that cutting down the stocking rate will cause them to go "broke." My partner and I want to show you some results of proper range use in selected areas of Texas.

Second Speaker:

This chart shows the results of six years study of different rates of grazing of native range pastures at the Spur Experiment Station. They compared 6 pastures where 51 percent of the summer grass had been grazed with 6 other pastures that had 76 percent of the grass grazed. Notice the pounds of gain per acre and average daily gain of each steer -- also grade of steers under each degree of grazing. (Point out.) Actually the 71 steers on properly used pasture produced more beef than the 108 steers on the heavily used pasture and sold for more per 100 pounds. This was due to higher quality of forage.

Spur Station

6-year Study of Utilization - Yearling Steers
6 Pastures of Each

		51% Utilization of grass		*76% Utilization of grass*
Lb. gain per A.		29		27
Lb. gain per steer		148		93
Av. daily gain, 146 days		1.01		0.61
Total gain, pounds	71 steers	10,508	108 steers	10,044
Grade				
Good or better		58%		3%
Medium		27%		55%
L. med. or thin		15%		42%

First Speaker:

In Atascosa county, Henry Thane' s 175 cows averaged 60 percent calf crop which weighed 240 pounds each or a total of 25, 200 pounds when marketed. Then he cut his cows to 85 head and now his calf crop is 90 percent which averages 400 pounds or 30, 600 pounds of beef from the same acreage.

Atascosa County

	Before	*After*
Breeding cows	175	85
Calf crop	60%	90%
Calves produced	105.0	76.5
Av. calf weight	240 lb.	400 lb.
Total beef produced	25, 200 lb.	30, 600 lb.

Second Speaker:

Down in McMullen County, Clifton Wheeler, Jr. began a demonstration on proper rate of stocking and range management in 1949 and carried it through 1951. Mr. Wheeler used 1, 250 acres of rangeland for the demonstration that was stocked with 100 head of grown cows in 1949. He had observed the manner in which the cattle had been eating the grass to the crown and still looked poor in condition, and the calf crop was low. He cut the number of cows grazing on this acreage during 1950 and 1951.

Here are his results from 1949 to 1951:

Pasture of 1, 250 Acres

Year	No. cows	Acres per head	No. calves	% Calf crop	Av. Wt. Calves	Lb. Beef sold
1949	100	12.5	60	60	300	18, 000
1950	65	20.0	62	95.2	425	26, 350
1951	74	16.9	65	87.8	340	22, 100

The beef production in 1950 shows proper range use. In 1951, Mr. Wheeler had to increase his cows to 74 on the pasture because of the drouth. The weight per calf was reduced to an average of 340 lb. The outstanding figures from this demonstration show the advantages of allowing more acres per cow and a higher calf crop which result in more pounds of beef marketed. Overstocking, Mr. Wheeler found, does not pay in several ways - the calf crop is less, it ruins the turf, cattle do not stay in as good condition and the calves do not bring top prices on the market. The pasture on which this demonstration was conducted is in fair condition since going through the critical drouth in South Texas.

First Speaker:

Too much grazing for too long a time on the Edwards Plateau kills out nearly all of the desirable bunch grasses which reproduce from seed only. Poisonous bitterweed and other undesirable plants invade in great numbers because all the good plants are gone, and there is nothing to keep the bad ones out. A possible permanent solution to the problem is lighter stocking and a system of deferred or rotation grazing.

Second Speaker:

This chart shows the deferred grazing plan established at the Sonora Station in 1941 and continued for five years. Livestock were kept off pastures A, F and H each year from early May until September while other pastures were grazed year-long. Compare tne five-year stocking rates: 10.5, 8.8, 10.8 and 15.7 acres per animal unit respectively. From this, it is easy to see that the pastures rested in the summer supported one and one-half times more grazing per acre on a year-long basis than the average pasture which was grazed all year. Even with this heavier use, the deferred pastures had much less poisonous bitterweed and a big increase in the valuable bunch grasses. This data shows the definite advantages of deferred grazing in this area.

(Give specific examples of proper range use locally if definite figures can be given.)

Sonora Station Pastures*

5 yr. Average Stocking Rates

<table>
<tr><td>Pasture A
10.5 A. per A.U. per year</td><td rowspan="2">All other pastures grazed year-long</td></tr>
<tr><td>Pasture F
8.8 A. per A.U. per year</td></tr>
<tr><td>Pasture H
10.8 A. per A.U. per year</td><td>15.7 A. per A.U. per year</td></tr>
</table>

**Pastures A, F and H deferred from May until September each year. Average stocking rate on deferred pastures 10 acres per animal unit year-long.*

First Speaker:

We have given you various examples of proper range use. If managed well, proper use means more meat and wool with fewer breeding animals. This is accomplished through higher calf and lamb crops which will reach heavier weights at marketing time. Even more important, the range will improve in condition. But how can you tell if your range is properly stocked?_____ will tell you the two ways of finding how many head of livestock you should run on your ranch.

Second Speaker:

The first method is known as the *forage inventory* or *range survey*. It includes making a detailed survey of the kind and density of vegetation (or plants) on a ranch and figuring the grazing capacity from it. It is rather technical and is losing popularity, both with governmental agencies and ranchmen. The other method of figuring your rate of stocking is by trying it out,

(i.e. stocking record) and keeping data as to any change in range condition, indicator plants or erosion. Utilization and production checks should be made in every season during the year. When the stocking rate for any given type is known in a county, rates on like areas will be about the same and similar stocking rates can be recommended. The stocking rate will determine the use of forage, but there are certain measuring sticks which should be used. In any stocking system, it is best to graze plants when they are the most nutritious. Of course, care must be taken during the critical period early in the spring to avoid too heavy use.

First Speaker:

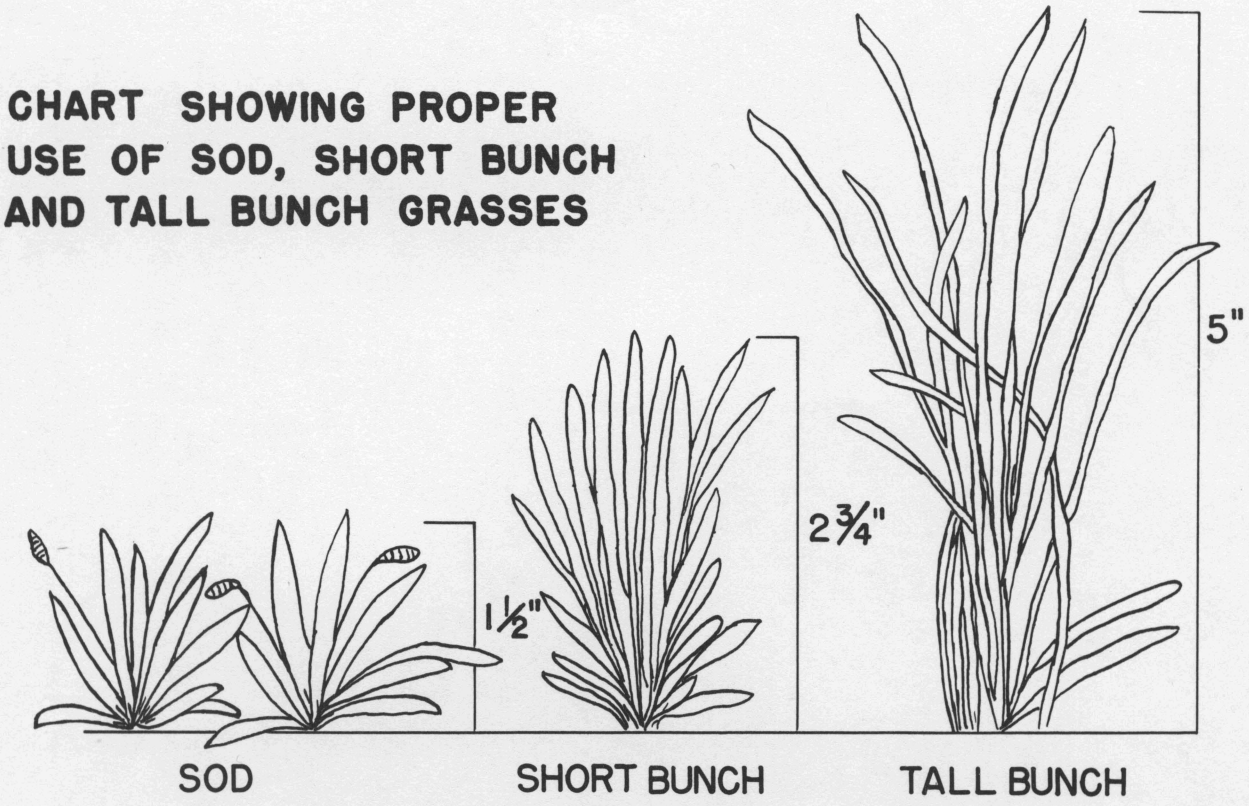
The sod-forming grasses such as curly mesquite, buffalo, tobosa and salt grass, together with Texas wintergrass and the various threeawn grasses, should be grazed in the spring and summer. The bluestems should be grazed before they are full grown to get the best use and the smallest amount of leaching of protein, phosphorus and calcium. The grama grasses, especially blue and black, should be grazed during the fall and winter as these grasses cure well in place and do not lose many of their food nutrients after they are full grown. Then, what are some of the most important points in proper utilization on a sustained yield basis?

Second Speaker:

First, maybe some of you are wondering what _____ means by *sustained yield basis*. Men who make studies of ranges and climates tell us that in 10 average years in the range country, one year will be an almost complete drouth; there will be two years of very low rainfall; the other seven years will be about average or above. Drouth is common in Texas. Recent studies show that rainfall is short one year out of five in East Texas and drouth occurs an average of two years out of five in the western part of the State. This must be taken into account in our management plans and ranges should be grazed on a sustained yield basis. To do this, enough seed and residue should remain on the land during good years to furnish enough forage for livestock without extra feeding during the bad years. Normally, grass produces from 50 to 70 percent more than it needs. This amount can be grazed. The remaining 30 to 50 percent is necessary for grass to stay alive, produce seed and grow. Therefore, in order to prevent damage to plants during drouth the best system is to graze about half of the annual forage production and leave a fourth for seed and a fourth for residue each year.

First Speaker:

Keeping these ideas in mind then, the sod or turf-forming grasses such as curly mesquite and buffalo should not be grazed closer than 1½ inches above the ground. The short bunch grasses such as blue, black, sideoats and hairy grama should not be grazed closer than 2½ to 3 inches above the ground, and the tall bunch grasses such as the bluestems should not be grazed lower than 4 to 6 inches. (Use chart.) A ranchman grazing his livestock according to these heights actually will have used 50 percent of the annual forage production, and left 50 percent for reserve, residue and reproduction. These figures vary according to changes in rainfall and management. Certainly a good scattering, about one-fifth of the seed stalks, should be left on grazing land each year.



Second Speaker:

Before giving you a summary of the important things to remember in proper range use, let me say that some men made a study recently and found that letting the grasses grow back and reproduce themselves along with good management was the best way of getting pastures back into good condition. They found a few exceptions where ranches had been severely overgrazed and in these cases, some hand seeding should be done. Generally, it is even more important that rangeland be grazed for sustained forage production.

First Speaker:

We have shown you that proper use means more meat. On the other hand, more cows often mean less calves, as the animals are so busy trying to maintain themselves that they do not breed. Provide a feed reserve for the short years by proper methods of range use. This is your future insurance--your grass insurance--and it is sound business.

This ends our demonstration. Are there any questions? If not, we feel sure you will find the points we have covered are good ones which are worth remembering.

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